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(74) Agents: ARNOLD, Craig, J. et al.; Amster, Rothstein & Ebenstein LLP, 90 Park Avenue, New York, NY 10016 (US).

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(71) Applicant (for all designated States except US): ALBERT EINSTEIN COLLEGE OF MEDICINE OF YESHIVA UNIVERSITY [US/US]; 1300 Morris Park Avenue, Bronx, NY 10461 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LAWRENCE, David [US/US]; 21 Hemlock Road, Hartsdale, NY 10530 (US). PESTELL, Richard [AU/US]; 4556 Boston Post Road, Pelham Manor, NY 10803 (US). ALBANESE, Christopher [US/US]; 1124 Hunter Avenue, Pelham Manor, NY 10803 (US).

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(54) Title: CAGED LIGANDS AND USES THEREOF

(57) Abstract: Provided are caged compounds comprising a ligand that specifically reacts with a receptor not naturally present in mammals. The cage is released from the ligand upon illumination of the compound with light. Also provided are cells transfected with a gene of interest and a gene encoding a receptor, the gene of interest operably linked to a genetic element capable of being induced by the receptor when bound to a ligand, and the receptor not naturally present in the species of the cell. The cells also comprise a caged ligand of the receptor. Additionally provided are methods of inducing a gene of interest in the above cells. Also provided are methods of repressing a gene of interest in a cell using caged ligands of receptors. Methods are additionally provided for inducing elimination of a target sequence in a cell of a species, using a caged ligand and a recombinase.